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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,851	06/29/2001	John R. McGarvey	5577-237	9861
20792	7590	09/07/2005	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC PO BOX 37428 RALEIGH, NC 27627			DARROW, JUSTIN T	
			ART UNIT	PAPER NUMBER
			2132	

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/896,851

Applicant(s)

MCGARVEY, JOHN R.

Examiner

Justin T. Darrow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-14 and 21-27 is/are allowed.
- 6) ☐ Claim(s) 15-17 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 18-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                                    |

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1. Claims 1-30 have been examined.

***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 06/29/2001 was filed before the mailing date of the first Office action on the merits. The submission is in compliance with the provisions of 37 CFR 1.97(b)(3). Accordingly, the information disclosure statement is being considered by the examiner.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 29 and 30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 29 and 30 are drawn to computer program products each comprising a computer readable storage media having computer readable program code embodied therein. A statutory invention requires a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized. See MPEP § 2106 IV. B. 1(a). This rejection may be overcome by:

deleting "generates" in claim 29, page 22, line 17 and replacing with --causes a computer to generate--;

deleting "authenticates" in claim 29, page 22, line 20 and replacing with --causes the computer to authenticate--;

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deleting “provides” in claim 29, page 22, line 22 and replacing with --causes the computer to provide--;

deleting “authenticates” in claim 30, page 22, line 30 and replacing with --causes a computer to authenticate--;

deleting “signs” in claim 30, page 23, line 1 and replacing with --causes the computer to sign--; and

deleting “forwards” in claim 30, page 23, line 3 and replacing with --causes the computer to provide--.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 29 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted element is: a computer caused by the computer program product to perform generating, authenticating, and providing.

Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP

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§ 2172.01. The omitted element is: a computer caused by the computer program product to perform authenticating, signing, and forwarding.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 15-17 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Ganesan, U.S. Patent No. 5,535,276 A.

As per claims 15 and 28, Ganesan depicts a method and system of providing authentication for communications between a Kerberos client and a public key infrastructure (PKI) server, the method and system comprising:

authenticating a message from the Kerberos client at a party trusted by the PKI server (see column 15, lines 44 (eq. (1')) and 65-67; column 16, lines 1-4; figure 2, item 110, 120, 1'; figure 3A, step 230; an authentication server receives the message 1' from a Kerberos client including a Kerberos password c and performs a decryption operation, [[[TEMP-CERT]Dc]Dcy]Ecy] to recover the temporary certificate of the Kerberos client, TEMP-CERT, to authenticate it);

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signing the authenticated message with the PKI private key of the party trusted by the PKI server (see column 16, lines 14-15 and 20-24; figure 3A, step 230; the authentication server signs [[TEMP-CERT]Dc] with its private key Dcy);

and

forwarding the authenticated message to the PKI server (see column 16, lines 57-67; figure 2, items 120, 1', 110, 3', and 140; transmitting the message including [[TEMP-CERT]Dc]Dcy] to a ticket granting server).

As per claim 16, Ganesan further describes:

incorporating an identification of a principal of the message from the Kerberos client with the signed authenticated message (see column 16, lines 14-15; the identifier of the client shown in the portion of the message, Kc,tgs,time-exp,).

As per claim 17, Ganesan additionally points out:

incorporating the identification of the principal in the message from the Kerberos client (see column 15, line 44; c,tgs,time-exp identifies the principal).

***Allowable Subject Matter***

8. Claims 1-14 and 21-27 are allowed.

9. Claims 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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10. The following is an examiner's statement of reasons for allowance:

Claims 1-14 and 27 are drawn to a method and system of authenticating a message from a client using a first authentication protocol to a resource manager using a second authentication protocol different from the first authentication protocol, respectively. The closest prior art, Ganesan, U.S. Patent No. 5,535,276 A, shows a similar method and system.

Ganesan illustrates a method of authenticating a message from a client using a first authentication protocol (see column 16, lines 44-57; figure 2, items 110, 140, and 3'; a modified Kerberos protocol using temporary public private keys) to a server using a second authentication protocol different from the first authentication protocol (see column 17, lines 63-67; column 18, lines 1-13; figure 2, items 110, 150, and 6'; a server using a digital signature with a long-term private key for authentication to a processor knowledge of the server's long-term public key), comprising:

generating a second message from the message from the client (see column 17, lines 14-25; figure 2, items 110, 140, and 4'; figure 3A, step 340; the ticket granting server signs the message from the client using its private key), and

the second message including information from the client which has been authenticated using the first authentication protocol (see column 17, lines 15-25; figure 2, items 110, 140, and 4'; figure 3A, step 360; where the tgs\_rep message contains the ticket granting ticket, Tc,tgs; see column 16, lines 64-67; column 17, lines 1-4; figure 2, items 110, 140, and 3'; figure 3A, steps 310, 320, and 330; the ticket granting server retrieves the temporary public key (Ec.temp and Nc.temp) from the temporary certificate TEMP-CERT to retrieve the ticket granting ticket (Tc,tgs) encrypted with the private key of the ticket granting server, expressed as [Tc,tgs] Dtgsy).

However, Ganesan neither teaches nor suggests authenticating the second message using the second authentication protocol and providing the authenticated second message to a resource manager. This combination of steps explicitly recited in independent claims 1 and 27 renders claims 1-14 and 27, respectively, allowable.

Claims 21-26 are drawn to a system for authentication of messages from a client utilizing Kerberos authentication and a resource manager utilizing public key infrastructure (PKI) authentication. The closest prior art, Ganesan, U.S. Patent No. 5,535,276 A, shows a similar system.

Ganesan describes a system comprising:

a public key signature service configured to

receive a Kerberos service ticket (see column 16, lines 57-63; figure 2, items 110, 3', and 140; receiving a transmitted message with a ticket granting ticket, Tc,tgs, encrypted by Dtgsy),

authenticate the Kerberos service ticket (see column 17, lines 1-7; figure 3A, step 330; decrypting the ticket granting ticket to authenticate the user), and

generate a message incorporating data associated with the authenticated Kerberos service ticket which is signed using a digital signature based on a PKI private key (see column 17, lines 14-25; figure 2, items 110, 140, and 4'; figure 3A, step 340; the ticket granting server signs the message from the client using its private key).

However, Ganesan neither shows nor implies PKI certificate so as to allow the resource manager to authenticate the message and provide the signed message to the resource manager. This distinct feature explicitly recited in independent claim 21 renders claims 21-26 allowable



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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Ganesan, U.S. Patent No. 5,737,419 A discloses a crypto-system where all system users have a first private key portion known only to the associated user and a second private key portion accessible to a second user.

### ***Telephone Inquiry Contacts***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin T. Darrow whose telephone number is (571) 272-3801, and whose electronic mail address is justin.darrow@uspto.gov. The examiner can normally be reached Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barrón, Jr., can be reached at (571) 272-3799.

The fax number for Formal or Official faxes to Technology Center 2100 is 571-273-8300. In order for a formal paper transmitted by fax to be entered into the application file, the paper and/or fax cover sheet must be signed by a representative for the applicant. Faxed formal


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papers for application file entry, such as amendments adding claims, extensions of time, and statutory disclaimers for which fees must be charged before entry, must be transmitted with an authorization to charge a deposit account to cover such fees. It is also recommended that the cover sheet for the fax of a formal paper have printed **"OFFICIAL FAX"**. Formal papers transmitted by fax usually require three business days for entry into the application file and consideration by the examiner. Formal or Official faxes including amendments after final rejection (37 CFR 1.116) should be submitted to 571-273-8300 for expedited entry into the application file. It is further recommended that the cover sheet for the fax containing an amendment after final rejection have printed not only **"OFFICIAL FAX"** but also **"AMENDMENT AFTER FINAL"**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-2100.

September 4, 2005

  
**JUSTIN T. DARROW**  
**PRIMARY EXAMINER**  
**TECHNOLOGY CENTER 2100**